

for Info

September 27, 1971

MEMORANDUM

TO: 340/Bill Reed
242/Homer Morgan

FROM: 340/Bob Goetz, Aeroelasticity Branch, Loads Division

SUBJECT: Shuttle Activities September 20-24, 1971

1. The Space Shuttle Dynamic Test Technology Committee meeting was held at MSFC September 21-22, 1971. The purposes of this initial organizational meeting were to define the purposes, objectives, and plan of action for the group. Highlights of the meeting are attached with detail minutes of the meeting to follow.

2. A review of FY 72 component synthesis program underway at MSFC was conducted with Dick Shock and John Admire. This program is a direct duplication of effort of work planned as a task by Kruszewski of Langley Research Center under the Grumman Master Agreement. However, the MSFC program was initiated under FY 71 funds (63K) and is of limited scope. Therefore, it is recommended that the Grumman task, which could be considered a follow-on program of broader scope, should be conducted. Independent approaches to the part of both studies concerning "component damping synthesis" seems worthwhile and justifiable.

3. Review of FY 71-72 Liquid Dynamics program at MSFC was conducted with Larry Kiefling. All programs seem to be progressing on schedule with the exception of the in-house flexible baffle tests (stainless steel and Teflon baffles to be tested in liquid nitrogen) which have been delayed because the facility has been tied up with other work. Final Reports are presently being prepared under the following tasks:

- (1) Analysis of Propellant Feedline Dynamics - SWRI
- (2) Dynamics of Ellipsoidal Bulkhead Containing Fluid - North American/Rockwell
- (3) Advanced Substructuring Techniques and Modular Structures - Lockheed/Huntsville

4. To date none of the FY 72 funds allocated to MSFC for Shuttle Dynamics & Aeroelasticity are obligated or committed.

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5. Two Martin Marietta personnel have been working at Langley Research Center setting up instrumentation, calibrations, etc., in advance of the control surface instability test. Tests are currently scheduled to be initiated September 29 in the $M = 20$ high Reynolds number helium facility.

6. Two MSFC personnel have been working at Langley Research Center in support of ground wind program conducting vibration surveys on the model. The test schedule for this program has slipped until February 1972 at the earliest.

Robert C. Goetz
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Enclosure

cc
242/LD
340/Aero. Br.
101/Official Files

340/RCGoetz:ag

340/PWH

340/AGR

242/HLR